IN THE CLAIMS:

The following is a complete list of the claims now pending; this listing replaces all earlier versions and listings of the claims.

Claim 1 (currently amended): An image processing apparatus comprising:

a saturation calculation unit arranged to calculate saturation information of an image;

a saturation conversion characteristic generating unit arranged to generate a saturation conversion characteristic on the basis of ~~a~~ conversion ~~lines~~ line or ~~curves~~ curve corresponding to ~~each~~ a conversion condition for a low-saturation side and a conversion line or curve corresponding to a conversion condition for a high-saturation side, ~~where the saturation conversion characteristic shows the relationship between input saturation information and output saturation information~~; and

a saturation conversion unit arranged to convert the saturation of the image on the basis of the saturation conversion characteristic.

Claim 2 (canceled)

Claim 3 (previously presented): The apparatus according to claim 1, further comprising a conversion condition setting unit arranged to set each conversion condition for the low-saturation side and the high-saturation side by using the input saturation information.

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Claim 4 (previously presented): The apparatus according to claim 1, further comprising an instruction unit arranged to make an instruction input by a user in order to set each conversion condition for the low-saturation side and the high-saturation side.

Claims 5 and 6 (canceled)

Claim 7 (previously presented): The apparatus according to claim 1, wherein the saturation conversion characteristic exhibits a monotonic increase or a monotonic decrease.

Claims 8-11 (canceled)

Claim 12 (previously presented): The apparatus according to claim 1, further comprising:

a detection unit arranged to detect a color distribution of the image;

a generation unit arranged to generate gradation correction information of the image on the basis of the color distribution; and

a gradation correction unit arranged to perform gradation correction of the image on the basis of the gradation correction information.

Claim 13 (previously presented): The apparatus according to claim 12, wherein said saturation conversion unit performs saturation conversion on an image which has undergone gradation correction by said gradation correction unit.

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Claim 14 (previously presented): The apparatus according to claim 12,

wherein said generation unit comprises:

a highlight calculation unit arranged to calculate highlight area

information of an image on the basis of the color distribution; and

a white balance calculation unit arranged to calculate white balance

information on the basis of the highlight area information and a predetermined highlight value,

and wherein said gradation correction unit corrects gradation of the image on the basis of the

white balance information and the highlight value.

Claim 15 (previously presented): The apparatus according to claim 12, wherein

said generation unit comprises:

a shadow calculation unit arranged to calculate shadow area

information of an image; and

a black balance calculation unit arranged to calculate black balance

information on the basis of the shadow area information and a predetermined shadow value,

wherein said gradation correction unit corrects gradation of the image on the basis of the black

balance information and the shadow value.

Claim 16 (currently amended): An image processing method comprising:

a saturation calculation step, of calculating saturation information of an

image;

a saturation conversion characteristic generating step, of generating a

saturation conversion characteristic on the basis of a conversion ~~lines~~ line or ~~curves~~ curve

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corresponding to ~~each~~ a conversion condition for a low-saturation side and <u>a conversion line or</u> <u>curve corresponding to a conversion condition for</u> a high-saturation side, ~~where the saturation conversion characteristic shows the relationship between input saturation information and output saturation information~~; and

a saturation conversion step, of converting the saturation of the image on the basis of the saturation conversion characteristic.

Claim 17 (canceled)

Claim 18 (previously presented): The method according to claim 16, further comprising a conversion condition setting step, of setting each conversion condition for the low-saturation side and the high-saturation side by using the input saturation information.

Claim 19 (currently amended): A recording medium comprising program codes of an image processing method at least comprising:

code for a saturation calculation step, of calculating saturation information of an image;

code for a saturation conversion characteristic generating step, of generating a saturation conversion characteristic on the basis of ~~a~~ conversion ~~lines~~ <u>line</u> or ~~curves~~ <u>curve</u> corresponding to ~~each~~ a conversion condition for the low-saturation side and <u>a conversion</u> <u>line or curve corresponding to a conversion condition for a</u> ~~the~~ high-saturation side, ~~where said saturation conversion characteristic shows the relationship between input saturation information and output saturation information~~; and

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code for a saturation conversion step, of converting the saturation of the

image on the basis of the saturation conversion characteristic.